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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,064	11/05/2003	H. William Bosch	029318-0978	6295

31049 7590 02/12/2009

Elan Drug Delivery, Inc. c/o Foley & Lardner
3000 K Street, N.W.
Suite 500
Washington, DC 20007-5109

EXAMINER	
TRAN, SUSAN T	

ART UNIT	PAPER NUMBER
1615	

MAIL DATE	DELIVERY MODE
02/12/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/701,064	BOSCH ET AL.	
	Examiner	Art Unit	
	S. Tran	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24,36-75 and 87-90* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24,36-75 and 87-90* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :12/29/08;10/09/08;10/29/08;09/11/08;07/17/08; and 01/16/07.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (f) he did not himself invent the subject matter sought to be patented.

Claims 1-24, 36-75 and 87-90 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter. While the parent applications disclose the same invention, there is no common inventor in the present application and the parent applications. Where it can be shown that an applicant "derived" an invention from another, a rejection under 35 U.S.C. 102(f) is proper. *Ex parte Kusko*, 215 USPQ 972, 974 (Bd. App. 1981).

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-24, 36-75 and 87-90 are rejected under 35 U.S.C. 102(e) as being anticipated by Jain et al. US 20020012675.

Jain teaches a nanoparticulate composition comprise a nanoparticulate drug or other agent to be administered, such as a crystalline or amorphous nanoparticulate drug or other agent, or a combination of a crystalline and amorphous nanoparticulate drug or other agent, having an effective average particle size, prior to inclusion in the composition, of less than about 1000 nm. The composition also comprises at least one

surface stabilizer associated with the surface of the nanoparticulate drug or other agent. Optionally, one or more auxiliary excipient materials can also be included in the controlled release composition (paragraphs 0014 and 0040). The claimed particle size is disclosed in paragraphs 0016 and 0052. Specific drugs include glipizide are disclosed in paragraphs 0045-0047, 0122 and examples. Specific surface stabilizers are disclosed in paragraphs 0048-0051. Jain further teaches the claimed method of making the nanoparticulate dosage form (see paragraphs 0068-0076).

Claims 1-24, 36-75 and 87-90 are rejected under 35 U.S.C. 102(e) as being anticipated by Jain et al. US 6,316,029.

Jain teaches a nanoparticulate solid formulation comprises a poorly soluble nanoparticulate active agent to be administered, having an effective average particle size prior to inclusion in the dosage form of less than about 2000 nm, at least one surface stabilizer adsorbed on the surface thereof, and at least one pharmaceutically acceptable water-soluble or water-dispersible excipient. The poorly soluble nanoparticulate active agent can be in a crystalline form, semi-crystalline form, amorphous form, or a combination thereof. The effective average particle size of the nanoparticulate active agent prior to inclusion in the dosage form is less than about 1500 nm, less than about 1000 nm, less than about 600 nm, less than about 400 nm, less than about 300 nm, less than about 250 nm, less than about 100 nm, or less than about 50 nm (column 5, lines 45-64). Poorly soluble active agents include glipizide are disclosed in column 6, lines 34 through column 7, lines 1-3; and examples. Suitable surface stabilizers are disclosed in column 7, lines 17 through column 8, lines 1-19.

Jain further teaches the claimed method of making the nanoparticulate dosage form (columns 10-11).

Claim Rejections - 35 USC § 103

Claims 1-8, 10, 11, 13-15, 17-24, 40-43, 45-50, 52, 53, 55-65, 67, 68, 70-75 and 87-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liversidge et al. US 5,145,684, in view of Stamm et al. WO 98/31360 A1.

Liversidge teaches a dispersible particle comprising from about 0.1-60% crystalline drug substance, and from about 0.1 to about 90% surface modifier. The particle has an effective average particle size of less than about 400 nm (abstract; column 2, lines 31-43; and column 5, lines 65 through column 6, lines 1-5). Suitable drug substance includes anti-diabetic agents (column 3, lines 57-58). Surface modifier includes hydroxypropyl cellulose (column 4, lines 34-63). Liversidge further teaches a method for preparing the dispersible particle comprising dispersing a drug substance in a liquid dispersion that contains surface modifier to form a premix, homogenizing the premix, and subjecting the premix to grinding media (column 5, lines 41 through column 6, lines 1-17). The obtained dispersion of surface modified drug nanoparticles is combined with pharmaceutical excipient to form pharmaceutical formulation for oral, rectal, injection administration, and the like (column 7, lines 48-64).

Liversidge does not explicitly teach the claimed active, such as glipizide.

Stamm teaches a composition having high bioavailability comprising micronized glipizide as active agent suspended in a solution containing surfactant (page 5, lines 32-

38; examples 1 and 6). Stamm further teaches active agent in micronized form having particle size below 20 μm. Thus, it would have been obvious to one of ordinary skill in the art to select glipizide as an active agent because Stamm teaches that glipizide is a well known insoluble drug, and that the need to improve dissolution and bioavailability of glipizide is well known in the art, and because Liversidge teaches a formulation suitable for improving bioavailability of a wide variety of active agents including anti-diabetic agents (abstract; and column 3, lines 57-58).

It is noted that the cited references do not expressly teach the claimed properties, such as the T_{max}, C_{max}, AUC, and release profiles. However, it is the position of the examiner that the composition taught by the cited references would have the properties similar to that of the claimed properties, because the references teach the use of the claimed surface modifying agent hydroxypropyl cellulose to obtain a surface modified nanoparticle having effective particle size of less than 400 nm. It is noted that products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liversidge et al. US 5,145,684, in view of Stamm et al. WO 98/31360 A1 and Baralle et al. GB 2316316.

Claim 16 was indicated allowable during the interview dated 03/21/07. However, upon reconsideration, claim 16 is rejected for the following reason:

Liversidge is relied upon for the reasons stated above. Liversidge does not teach the second population of particle having different particle distribution from the particle distribution of (a). However, bimodal particle distribution is known in pharmaceutical art. Baralle teaches a liquid composition comprising bimodal particle size distribution suitable for parenteral administration (abstract; page 3, lines 23-32; and page 7, lines 3 through page 8, lines 1-23). Accordingly, depend in the release profile desired, the skilled artisan would have been motivated to modify the formulation of Liversidge to include the bimodal particle distribution in view of the teaching of Baralle, because Baralle teaches a bimodal particle distribution is known in pharmaceutical art, because Baralle teaches a bimodal particle distribution that exhibits a useful sustained release profiles that is free of serious side-effects (pages 3-4).

Claims 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liversidge et al. US 5,145,684, in view of Stamm et al. WO 98/31360 A1 and Lo et al. 4,389,397.

Liversidge is relied upon for the reason stated above. Liversidge does not explicitly teach the viscosity of the liquid dosage form. However, the viscosity of the dosage form is inherent because Liversidge teaches a viscosity of the premix suspension is less than about 1000 centipoise (1000 mPa·s) (column 6, lines 5-31). Further, Lo is cited for the teaching of low water solubility drug is preferably formulated

in liquid dosage form having low viscosity to achieve excellent stability and syringability (abstract; and column 4, lines 10-17). Thus, it would have been obvious to one of ordinary skill in the art to modify the liquid dosage form of Liversidge in a low viscous solution in view of the teaching of Lo to obtain a stable liquid dosage form suitable for water-insoluble drug. This is because Lo teaches Lo teaches liquid dosage form having high viscosity will cause precipitation, irritation and tissue damage at the injection site (column 1, lines 25-29), because Lo teaches a low viscosity liquid dosage form overcomes the disadvantages in the prior arts and exhibits excellent syringability (ID), and because Liversidge teaches the desirability of obtaining a suitable liquid dosage form useful for a wide variety of water-insoluble drugs.

Claims 9, 12, 44, 51, 54, 66 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liversidge et al. US 5,145,684, in view of Stamm et al. WO 98/31360 A1 and Parikh et al. WO 98/07414.

Liversidge and Stamm are relied upon for the reason stated above. The references do not teach the steps in claim 44, as well as the use of at least two surface stabilizers.

Parikh teaches a composition comprising microparticles of water-insoluble drugs and method for preparing same (abstract). The composition comprises the use of combination of surface modifiers and a phospholipid (page 3, lines 4-16). The method comprises mixing the insoluble drugs particle with phospholipid and precipitating from a dissolved mixture of the substance, phospholipid and surfactant followed by sonication,

milling, homogenization, and solvent precipitation (page 8, first paragraph). Thus, it would have been obvious to one of ordinary skill in the art to modify the method of Liversidge using the steps in view of the teaching of Parikh, because Parikh teaches a method suitable to prepare water-insoluble drugs that converts lipophilic to hydrophilic surfaces with increased steric hindrance/stability, and possibly modify zeta potential of surfaces with more chare repulsion stabilization (page 3, last paragraph).

Response to Arguments

Applicant's arguments filed 07/23/08 have been considered but are moot in view of the new ground(s) of rejection.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Tran whose telephone number is (571) 272-0606. The examiner can normally be reached on M-F 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on (571) 272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. Tran/
Primary Examiner, Art Unit 1615